Problem K: Waking

Alice went on shaking her, and the Queen kept on growing shorter—and fatter—and softer—and rounder—and...

...it really *was* a kitten, after all.

Figure 1: Kitten, descendant of Dinah

Alice awakes in her armchair, having witnessed the transformation of Kitten, from the Red Queen in her dreams to his usual self now in her arms.

Let us consider a different kind of transformation, one that applies to strings of characters. Let's say that you wanted to turn the string **QUEEN** into the string **KITTEN** using only two types of operations: erasing a character (in any position) and inserting a character (into any position). It's not difficult to see that the minimum number of operations to complete the transformation *QUEEN* → *KITTEN* is 7.

Write a program to find the minimum number of operations required to transform strings.

Input

Input starts with a positive integer **T**, that denotes the number of test cases ($T \leq 100$).

Each test case begins with a blank line. Then two strings are presented, each one in its own line. All strings will be formed by uppercase letters from the English alphabet, and their lengths will be between 1 and 300 (inclusive).

Output

For each test case, print the case number, and then print the minimum number of operations to transform any of the two strings into the other.

Sample Input

```
3

QUEEN
KITTEN

HATTER
HATTA

HARE
HAIGHA
```

Output for Sample Input

```
Case 1: 7
Case 2: 3
Case 3: 6
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